

What is Claimed is:

1. A method of generating a synthetic key frame of video text, the method comprising the steps of:

extracting a plurality of text areas from a video stream;

calculating importance measures according to weights for each of the extracted text areas;

selecting the number of text areas to be synthesized based upon the importance measures in the order of higher importance; and

synthesizing the text areas to be synthesized into the key frame.

2. The method of generating a synthetic key frame of video text according to claim 1, wherein the text areas are extracted according to certain intervals of the video stream.

3. The method of generating a synthetic key frame of video text according to claim 2, wherein the synthetic key frame is generated in each of the certain intervals of the video stream.

4. The method of generating a synthetic key frame of video text according to claim 2, wherein the certain intervals of the video stream are discriminated by scenes as logical edition units of a video.

5. The method of generating a synthetic key frame of video text according to claim 2, wherein the certain intervals of the video stream are discriminated by shots as physical edition units of a video.

6. The method of generating a synthetic key frame of video text according to claim 1, wherein the weights are determined in proportion to the size of the text area, the mean text size of the text area and the display duration time of a text.

7. The method of generating a synthetic key frame of video text according to claim 6, wherein the mean text size in the text area is determined by using the density and size of a histogram for the text area.

8. The method of generating a synthetic key frame of video text according to claim 6, wherein the display duration time of the text is determined by considering whether a previously extracted text area is identical to a currently extracted text area.

9. The method of generating a synthetic key frame of video text according to claim 6, wherein the weight increases as the size of the text area, the mean text size in the text area or the display duration time of the text increases.

10. The method of generating a synthetic key frame of video text according to claim 1, wherein the number of the text areas to be synthesized is selected from the plurality of text areas in the order of importance.

11. The method of generating a synthetic key frame of video text according to claim 10, wherein the number the text areas to be synthesized is determined according to browser size.

12. The method of generating a synthetic key frame of video text according to claim 10, wherein the sizes of the text areas to be synthesized are determined according to browser size.

13. A method of generating a synthetic key frame of video text, the method comprising the following steps of:

5 determining weights for a plurality of text areas based upon weight determining factors;

calculating importance measures of the text areas by applying the weights according to a certain rule;

10 selecting the number of text areas to be synthesized based upon the importance measures in the order of higher importance; and

synthesizing the text areas to be synthesized into the key frame.

14. The method of generating a synthetic key frame of video text according to claim 13, wherein the weight determining factors includes the size of the text areas,
15 mean text size in the text area and the display duration time of a text.

15. The method of generating a synthetic key frame of video text according to claim 13, wherein the certain rule is addition of values obtained by multiplying the weight determining factors with the corresponding weights.

20 16. The method of generating a synthetic key frame of video text according to claim 13, wherein the number of the text areas to be synthesized is selected from the plurality of text areas in the order of importance.

25 17. A method of calculating importance measure for generating a synthetic

key frame, the method comprising the steps of:

determining the sizes of weight determining factors;

determining weights based upon the sizes of the weight determining factors;

and

5 adding values obtained by multiplying the weight determining factors with corresponding weights.

10 18. The method of calculating importance measure for generating a synthetic key frame according to claim 17, wherein the weight determining factors include the size of the text areas, mean text size in the text area and the display duration time of a text.

15 19. The method of calculating importance for key frame synthesis according to claim 18, wherein the mean text size in the text area is determined by the densities and sizes of histograms about the text area.

20 20. The method of calculating importance for key frame synthesis according to claim 18, wherein the display duration time of the text is determined by considering whether a previously extracted text area is identical to a currently extracted text area.